

SOV/137-58-9-19977

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 270 (USSR)

AUTHOR: Kuperman, D.I.

TITLE: 45Kh Disk Steel as a Substitute for 43N Steel (Stal' marki
45-Kh-diskovaya kak zamenitel' stali 43N)

PERIODICAL: Tr. Nevsk. mashinostroit. z-da, 1957, Nr 2, pp 70-74

ABSTRACT: Ref. RZhMet, 1958, Nr 9, abstract 19976

1. Steel---Effectiveness

Card 1/1

SOV/137-58-9-19976

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 270 (USSR)

AUTHOR: Kuperman, D.I.

TITLE: Elimination of Rejects Due to Temper Brittleness in Turbine-disk Forgings of 45Kh Disk Steel (Likvidatsiya braka po otpusknoy khrupkosti pokovok turbinnykh diskov, izgotovlennykh iz stali marki 45Kh-diskovaya)

PERIODICAL: Tr. Nevsk. mashinostroit. z-da, 1957, Nr 2, pp 82-84

ABSTRACT: Application of a statistical method revealed a relationship between a_k and the P content of 45Kh steel. As a result, the maximum P contents are set at 0.025%. For steels containing > 0.03 P, a special heat treatment was devised based on repeated tempering and cooling after tempering by a combination of methods. Nr 45Kh disk steel, which is highly heat stable, may be used in a number of cases instead of costly 34KhM steel for temperatures up to 400°C.

1. Turbines--Equipment
2. Steel--Forging
3. Steel--Quality control

I.B.

Card 1/1

FILE:

PERIODICAL:
ABSTRACT:

Babayeva, E.V., Engineer and Kuperman, D.I.,
Methods of increasing the impact strength of forgings
in turbine manufacture. (Metody povysheniya udarnoy vya-
kosti pokovok, primenyayemykh v turbostroyenii.) 114-6-6/11
Construction) 1957, Vol. 3, No.6, pp. 20 - 23 (U.S.S.R.)

In the production of turbine disc forgings cases are observed of the metal having low impact strength although the values of the yield point, ultimate strength, elongation, reduction of area and hardness are all correct. Experience has shown that minor variations in the structure of fracture properties remain the same. This article presents the results of an investigation from which it is possible to establish a relationship between the structure of the fracture and value of the impact strength of forgings and also to find methods of heat treatment to improve the structure of fracture and to increase the impact strength of discs made from steels 34X and 40H. Twenty disc forgings of steel 34X which were made and heat-treated at different times were rejected for low impact strength. The heat treatment to which they had been subjected is described and since it was not satisfactory

FOR RELEASE: 08/23/2000

Card 1

Increasing the impact strength of forgings used
in turbine manufacture. (Cont.) 114-6-6/11

The forgings were given additional heat treatment. It was found that normal heat treatment conditions could not ensure complete recrystallisation of the steel and the metal texture corresponding to the condition of forging was maintained. Therefore different kinds of heat treatment were tried. These are classified into six different conditions. The types of fracture observed are classified into five groups and tables are given of the mechanical properties of the forgings before and after the various heat treatments. Six disc forgings of steel 40H which were rejected for low impact strength were examined. There was evidence of overheating in forging. The different discs were heat-treated in different ways and the results are given in a table. The table shows that after special heat treatment conditions the impact strength of the forgings was not However, on the majority of specimens the fracture has a fibrous structure. Since the rate of cooling was not tremendous influence on the impact strength and the structure of fracture heat treatment with faster cooling was effective in increasing the impact strength

Methods of increasing the impact strength of forgings used in turbine manufacture. (Cont.)
114-6-6/11

of the discs.
It is concluded that disc forgings of steels 34XM, 40H and 43H which were subject to overheating near the hub, usually, in the process of hot working, maintain their shiny, in the process of analysis of impact strength.

In crystalline fracture and low impact strength is not always clearly observed in degree of overheating is not particularly if the rate of cooling of the micro-structure hardening is not the rate of steel 34XM. Special heat treatment rease in the impact strength and improvement in the appearance of fracture of steel 34XM. Coarse grain of steel 34XM. Despite the stable improved in impact strength the appearance of the fracture remains either mixed or fine grained.

When the impact strength is low because cooling has not been fast enough during hardening of steels 34XM and 43H, repeated heat-treatment is permissible including hardening by cooling through water into oil. This treatment is less effective with steels 40H and 43H in the case of reheating in forging near the hub.

rd 3/4

2000

CIA-RDP86-00513R00092

AUTHOR:

Kuperman, D.I., Engineer

TITLE:

Elimination of the Deformations of Springs After Tempering (Ustraneniye deformatsii pruzhin posle zakalki)

117-58-6-17/56

PERIODICAL:

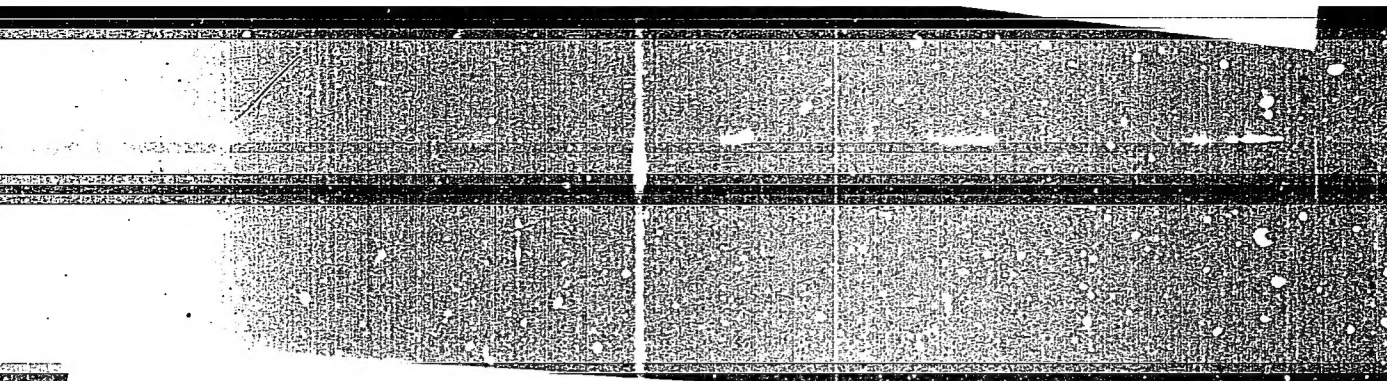
Mashinostroitel', 1958, Nr 6, pp 28-29 (USSR)

ABSTRACT:

In turbine manufacturing large springs made from wire 10 mm and more in diameter, and a height of at least 400 mm are used. The steel used for the manufacture of the springs is 60S2A. The springs in turbines are subjected to severe stresses, and must be tempered. But the tempering causes deformations, so that many springs are not fit for use. Special devices have been developed to prevent deformation. As these devices impede the tempering, a new method has been developed to make use of the softening of the steel during annealing. This softening process takes place during the decomposition of the martensite and is characterized by the low resistance of the steel to bending. During this stage the springs are brought into chucks which correct all deformations. These chucks are pipes of 175 mm in diameter. The springs are put into them after a heating of 30 min. at a temperature of 860-870°C, and are annealed for 1½ hours at a temperature of 400-420°C. The table the results of the testing.

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CIA-RDP86-00513R000927610002-4



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Methods of increasing the impact strength of forgings used
in turbine manufacture. (Cont.)
114-6-6/11

of the discs.

It is concluded that disc forgings of steels 34XM, 40H and 43H which were subject to overheating near the hub, usually, in the process of hot working, maintain their shiny crystalline fracture and low impact strength.

In steel 34XM a similar degree of overheating is not always clearly observed in analysis of the micro-structure particularly if the rate of cooling during the process of hardening is not great enough. Special heat treatment including heating to Chernov's 'b' point gives stable increase in the impact strength and improvement in the appearance of fracture of steel 34XM.

Coarse grain structure of overheating of steels 40H and 43H is not fully corrected by special heat treatment and despite the stable improvement in impact strength the appearance of the fracture remains either mixed or fine grained.

When the impact strength is low because cooling has not been fast enough during hardening of steels 34XM and 43H, repeated heat-treatment is permissible including hardening by cooling through water into oil. This treatment is less effective with steels 40H and 43H in the case of overheating in forging near the hub.

Card 3/4

Methods of increasing the impact strength of forgings used
in turbine manufacture. (Cont.) 114-6-6/11

There are 5 figures, 4 tables and 2 Slavic literature
references.

AVAILABLE:

Card 4/4

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000927610002

AUTHOR:

Kuperman, D.I., Engineer

TITLE:

Elimination of the Deformations of Springs After Temper-
ing (Ustraneniye deformatsii pruzhin posle zakalki)

PERIODICAL:

Mashinostroitel', 1958, Nr 6, pp 28-29 (USSR)

ABSTRACT:

In turbine manufacturing large springs made from wire 10 mm and more in diameter, and a height of at least 400 mm are used. The steel used for the manufacture of the springs is 60S2A. The springs in turbines are subjected to severe stresses, and must be tempered. But the tempering causes deformations, so that many springs are not fit for use. Special devices have been developed to prevent deformation. As these devices impede the tempering, a new method has been developed to make use of the softening of the steel during annealing. This softening process takes place during the decomposition of the martensite and is characterized by the low resistance of the steel to bending. During this stage the springs are brought into chucks which correct all deformations. These chucks are pipes of 175 mm in diameter. The springs are put into them after a heating of 30 min. at a temperature of 860-870°C, and are annealed for 1½ hours at a temperature of 400-420°C. In the table the results of the testing and measuring of these

Card 1/2

Elimination of the Deformations of Springs After Tempering 117-58-6-17/36

springs are given. There is 1 table.

AVAILABLE:

Library of Congress

Card 2/2

1. Springs-Deformation 2. Tempering-Applications

25(2)

CON/117-55-3-10/37

AUTHOR: Kuperman, D.I., Engineer

TITLE: A New Method of Making Balancer Axles (Novyy metod izgotovleniya osey balansira)

PERIODICAL: Mashinostroitel', 1959, Nr 3, p 17 (USSR)

ABSTRACT: On the author's suggestion, steel "20" formerly employed for the balancer axle (shown in drawing) of the "ATZ-NATI" tractor was replaced by steel "50G", of a higher wear resistance and far better resistance to deformation during heat treatment. This replacement has eliminated the operations of cementation, additional boring of the center hole after cementation, and sand blasting. All machining can now be done in a single cycle without the former transportation from machine tool to heat treatment ovens and back. The balancer axles for the cater-

Card 1/2

A New Method of Making Balancer Axles

SOV/117-59-3-10/37

pillar tractor "KhTZ" are now also made of "50G" steel. There is 1 diagram.

ASSOCIATION: Nevskiy mashinostroitel'nyy zavod imeni Lenina
(Nevskiy Machine Building Plant imeni Lenin)

Card 2/2

001-111-111

The first of the two main objectives of the program is to
provide a high level of identification of the program's
activities. The second objective is to provide a high level of
control over the program's activities. The program's activities
are controlled by the program's management and the program's
management is controlled by the program's management.

BERDYANSKIY, V.N.; KUPERMAN, E.Sh.; MIRSAGATOV, A.N.

Building subsurface drainage in the Golodnaya Steppo. Gidr.1 mel.
14 no.3:16-22 Mr :62. (MIRA 15.4)

1. Institut vodnykh problem i gidrotekhniki AN UzSSR.
(Golodnaya Steppe---Drainage)

HERDYANSKIY, V.N., inzh.; KUPERMAN, E.Sh., inzh.; MIRSAGATOV, A.N., inzh.

Mechanization of the construction of a deep covered drain. Mekh.
stroil. 19 no.7:18-19 J1 '62. (MIRA 15:7)
(Drainage) (Pipe-laying machinery)

BERDYANSKIY, V.N.; KUPERMAN, E.Sh.; MIRSAGATOV, A.N.

Technology f the combined mechanized construction of a closed
horizontal drainage in the Golodnaya Steppe. Vop. gidrotekh.
no.15:57-68 '63.

(MIRA 18:2)

REF ID: A11111

Kupersan, F. M. - "On controlling the development of wheat ears according to the theory of the plant growth in stages," Vestnik Mosk. un-ta, 1948, No. 12, p. 171-79

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

KUPERMAN, F.M. Docent

"Biological Peculiarities in the Development of Wheat Nodes." Thesis for degree of Dr. Biological Sci. Sub 22 Jun 49, Moscow Order of Lenin State U imeni M.V. Lomonosov

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Verkhernyaya Moskva. Jan-Dec 1949

RUSSIAN, P. K.

Agriculture

(Biological principles of wheat cultivation) (Moskva) Moskovski univ., 1950

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

KUTERIAN, F. F.

Seeds

Separation and storage of biologically valuable seeds as one of the most important conditions for increasing the productivity of cultivated plants, Vest. Mosk. Un., 5, No. 9, 1950.

Monthly List of Russian Accessions, Library of Congress, October 1952. Unclassified.

KUPERMAN, F. M.

Hybridization, Vegetable

Vegetative hybridization of cereals, Est. v shkole No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, July 1952.
Unclassified.

KURCIAN, PROF. F. I.

Barley

What are the characteristics of hull-less barley, its distribution and fertility?
Prof. F. M. Kurciyan. Est. v. shkolo No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

KUPERMAN, F. M.

Grasses

Vegetation hybridization of true grasses. Vest. Mosk. un. 7 No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October, 1952, ~~1953~~ Unclassified.

1. KUPERMAN, F.M.
2. USSR (600)
4. Growth (Plants)
7. Some laws of plant formation and their use in selection work. Sel.i sem. 19
no. 11, 52

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. F. K. KUPCHENKO

2. USSR (600)

4. Botany - Morphology

7. Morphophysiological methods in plant examination. Biul. MEIP. Ltd. biol. 57
no. 6. 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KUPERMAN, F. M. Prof.

"Basic Stages of the Organo-Genesis of Grains and the Direction of Their Variability," a paper given at the All-University Scientific Conference "Lomonosov Lectures", Vest. Mosk. Un., No.8, 1953.

Translation U-7895, 1 Mar 56

KUPERMAN, F.M., professor, doktor biologicheskikh nauk.

Regularity in the formation of fruit-bearing organs in plants.
Est. v shkole no.3:23-31 My-Je '54. (MLRA 7:7)

1. Kafedra darvinizma Moskovskogo gosudarstvennogo universiteta
imeni M.V.Lomonosova.
(Botany—Morphology)

KUPERMAN, F. M.

N/5
631.311
.K9

KUPFERMAN, F M

Etapy formirovaniya organov plodonosheniya zlakov (Stages of formation of the organs of fertility of cereals, by) F. M. Kuperman (1 dr.) Moskva, izd-vo Moskovskogo Universiteta, 1955. v. illus., diagrs. tables. At head of title: Moscow. Universitat. "Spisok Literatury": v. 1, p. 306-316. Lib. Has: v. 1.

KUPERMAN, F.M., professor, doktor biologicheskikh nauk.

Light as a factor in the development and changes in forms of
plants. Est. v shkole no.1:14-21 Ja-F '55. (MLRA 8:9)

1. Moskovskiy gosudarstvennyy universitet im.M.V.Lomonosova.
(Plants, Effect of light on)

KUPERMAN, F.M.; RZHANOVA, Ye.I; KAPITANOVA, T.A; ZHAKIPOVA, A.P;
LYUBIVAYA, N.S; LYUBIVYY, V.M.

Relation of plant developments to organogenesis of corn inflorescence.
Vest.Mosk.un. no.9:121-133 S '55. (MLBA 9:1)
(Corn (Maize))

KUPERMAN, F.M.

Role of light at different stages of the organogenesis of wheat, rye,
and barley. Trudy Inst.fiziol.rast. 10:272-285 '55. (MLRA 8:9)

1. Laboratoriya biologii razvitiya rasteniy kafedry darvinizma Moskovskogo
gosudarstvennogo universiteta im. M.V. Lomonosova.
(Plants, Effect of light on)

KUPERMAN, Fanni Mikhaylovna; STANKOV, S.S., professor, otvetstvennyy redaktor;
SEREBRYAKOV, I.G., professor, redaktor; MIKHAYLOVA, T.A., tekhnicheskiiy redaktor

[Biological principles in wheat growing] Biologicheskie osnovy kul'tury psenitsy. [Moskva] Izd-vo Moskovskogo univ. Vol.3. [Morpho-physiological methods of studying wheat species. Biological control of wheat plantations] Morfofiziologicheskie priemy issledovaniia vidov psenitsy. Biologicheskii kontrol' za posevami psenitsy. 1956. 279 p. (MIRA 9:11)
(Wheat)

KUPERMAN, F.M., professor.

Biological methods for checking the development and growth of corn.
Est. v shkole no.2:18-24 Mr-Apr '56. (MLRA 9:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Corn (Maize))

KUPERMAN, F.M.; LUCHSHEV, A.A.; SHUL'GIN, A.M.

Some features of the development and growth of corn in the new
corn regions. Report no.1. Izv. AN SSSR. Ser.biol. no.4:15-38
J1-Ag '56. (MLR 9:10)

1. Moskovskiy ordena Lenina i ordena Krasnogo znameni Gosudarstven-
nyy universitet imeni M.V.Lomonosova, Kafedry darvinizma klimatologii
i zemledeliya.

(MOSCOW PROVINCE--CORN (MAIZE))

COUNTRY : USSR
 CATEGORY : Cultivated Plants
 ASS. JOUR. : Zhurnal, No. 3, 1959, No. 10921
 AUTHOR : Superman, F. M.
 TITLE : University named M. V. Lomonosov
 : The Use of Morphophysiological Methods of Study in Corn
 : Breeding.
 ORG. PUB. : V sb.: Vopr. metodiki selektsii pshenitsy i kukuruzy.
 : Zhurnal, No. 3, 1957, 209-222.
 : Data (of the University named M. V. Lomonosov) on the
 : morphological control of the growth and development of
 : plants, of the condition of the vegetative cone of the
 : pericarp and ears and of the state of the axil buds in corn
 : varieties differing with respect to the length of the
 : growing season under definite meteorological conditions.
 : A close relationship was observed between the growth pro-
 : cesses and the passage through the developmental stages
 : and the stages of organogenesis. Also observed was the

1/5

COUNTRY :
 CATEGORY :
 ABS. JOUR. : RZhBiol., No. 1959, No. 10921
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT : difference in the nature of the requirements with respect to the conditions of the length of the day during the formation of the female and male generative organs. Nine stages of organogenesis were singled out during the formation of the male inflorescence and of the panicle starting from the undifferentiated growth cone until flowering, and 12 stages were singled out in the formation of the female generative organs and of the ear from the inception of its rudimentary form until the wax-stage maturity and the ripening of the kernels. The actual coming into being of the organogenesis stages occurs only in the presence of a def-

CARD: 2/5

COUNTRY :
CATEGORY :

ABST. JOUR. : RZhBiol., No. 1959, No. 10921

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : initial condition of the plants during a stage and is closely related to external conditions. By influencing the progress of the passage through the developmental stages and the stages of organogenesis, it is possible to change, in the required direction, the form, dimensions and other characteristics of the plants, the number of the rows of kernels in the ears, the number of ears, the weight of the kernels, etc. An additional feeding of the plants during the period of the 4th stage of organogenesis, when the

CARD: 3/5

COUNTRY :

CATEGORY :

ABS. JOUR. : RZhSiol., No. 1959, No. 10921

AUTHOR :

INST. :

TITLE :

ORIG. PUB. :

ABSTRACT :

formation of spikelets is in progress, promotes an increase in their number. Application of large doses of Cu at the beginning of the 6th stage when the pollen is being formed, causes its complete underdevelopment. The length of the ear depends on the duration of the 3d stage of the organogenesis of the ear on which the elongation of the growth cone is in progress. Better conditions of growth at the 4th stage promote the formation of a larger number of spikelets, the formation of productive plants, etc. Differentiation of the growth cone of the male generative organs begins considerably earlier than that of

CARD: 4/5

COUNTRY :
CATEGORY :

ABST. JOUR. : RZhEiol., No. 1959, No. 10921

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : the female generative organs. The bursting is reached in 6-30 days, depending on the variety. The rate of the organogenesis of the ear (especially at the 3-7th stages) is higher in comparison with the rate of panicle formation and by flowering stage, an ear of corn overtakes the panicle in its development. The development of the generative organs proceeds faster under the conditions of the shortened 9-hour day. -- T. I. Shapiro

CARD: 5/5

USSR / General and Special Zoology. Insects.

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16424

Author : Dobrovolskii V.V., Kuperman E.M.

Inst : Not given

Title : On the Control of Swedish Fly larvae on Corn.
(O bor'be s lichinkami shvedskoi mukhi na kukur-
uze.)

Orig Pub: Seleksiya i semenovodstvo, 1957, No 1, 56

Abstract: More than 100 types and hybrids of corn were in the sown environs of Moscow at the end of May. A suspension of 2 liters of [hexachlorocyclohexane] HCH (0.05 g of 12% dust and 2.5 g of ammonium nitrate per 1 litre of water) was introduced into each group of plants June 13. (3-4 plants). Although the experimental young crops were greatly infested with larvae, the

Card 1/2

20

USSR / General and Special Zoology. Insects.

CIA-RDP86-00513R000927610002-

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16424

Abstract: plants became better June 22, the leaves restored their normal coloring, the fifth and sixth leaves developed normally, the sixth and seventh leaves opened up one to two days sooner, the plants were stronger than the control plants, while all the larvae in the plants died.

Card 2/2

KUPERMAN, F.M.

USSR/Cultivated Plants - Grains.

M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91592

Author : Kuperman, F.M.

Inst : Moscow State University

Title : Biological Control in the Development and Growth of Agricultural Crops.

Orig Pub : Nauka i peredov. opyt v s. kh., 1957, No 2, 28-30.

Abstract : Through observations on the formation of fruit-bearing organs in winter crops, the Moscow State University's Plant Development Biology Laboratories developed a method of determining the viability of winter crops during the wintering period by the condition of the growth cone. The method of determination is described in detail. In live plants the growth cone is white or light green with pronounced turgor. In dead plants the cone is

Card 1/2

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CIA-RDP86-00513R000927610002-

USSR/Cultivated Plants - Grains.

M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91592

characterized by complete loss of turgor, a turgor in the cells and the appearance of a yellow-brown and even brown-black color. The characteristics of 12 stages of organogenesis, established by the author are given in the article. They are characteristic for winter grains and it is recommended that observations be made on their processes for determining the necessity of certain agrotechnical measures at the proper time. -- G.N. Chernov.

Card 2/2

KUPERMAN, F.M., professor.

Variability of corncobs and panicles (in answer to V.I. Mal'tseva's question). Biol, v shkole no.3:91-94 My-Je '57. (MLRA 10:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Corn (Maize)) (Inflorescence) (Botany--Variation)

KUJERMAN, F.M., professor.

Biological control of the development and growth of farm crops.
Nauka i pered.op. v sel'khoz. 7 no.2:28-30 F '57. (MLRA 10:3)
(Field crops) (Biological research)

KUPPERMAN, F.M., professor; MOROZOVA, Z.A., aspirant; ROSTOVTSOVA, Z.P.,
Kandidat biologicheskikh nauk.

Biological investigation of the growth and development of spring
crops. Nauka i pered. op. v sel'khoz. 7 no.5:30-32 My '57.
(Wheat) (Oats) (Millet) (MIRA 10:6)

PISAREV, V.Ye., prof.; KUPERMAN, F.M., prof.; MAR'YAKHINA, I.Ye., kand. biol.
nauk.

Biological investigation of the growth and development of buckwheat.
Nauka i pered. op. v sel'khoz. 7 no.12:44-46 D '57. (MIRA 11:1)
(Buckwheat)

Kuperman, F. M.

25-9-9/40

AUTHOR: Kuperman, F.M., Doctor of Biological Sciences, Mar'yakhina, N.Ya.,
Candidate of Biological Sciences, Rybakova, M.I., Candidate of
Biological Sciences

TITLE: Regularities in the Development of a Plant (Zakonomernosti
razvitiya rasteniya)

PERIODICAL: Nauka i Zhizn', 1957, # 9, p 17-20 (USSR)

ABSTRACT: The article deals with the different stages in the vegetation
period of plants. Studies to this effect were especially in-
tensified in the first three decades of the XX-th century.
Soviet scientists had an important share in the development of
theories in the field of ontogeny of higher plants. Important
are the works of the following scientists: A.N. Beketov, K.A.
Timiryazev, V.A. Palladin, N.P. Krenke, V.N. Lyubimenko, N.A.
Maksimov and N.T. Kholodnyy. Of special importance are the
works of I.V. Michurin and the scientific research conducted
by T.D. Lysenko which led to the theory on the development of
plants by certain stages. It was proved that a series of basic
conditions were necessary to warrant the normal growth of a
plant in each stage, such as favorable temperature, the right

Card 1/2

' Regularities in the Development of a Plant

25-9-9/40

proportion between the length of days and nights, the spectral composition of light, a certain minimum of moisture, the existence of certain microelements, proper fertilization, etc. The discovery of recurring regularities in the growth of widely different plants helps to find new ways for the control over their growth and development.

There are 17 figures and 4 Russian references.

AVAILABLE: Library of Congress

Card 2/2

KUPERMAN, F., prof.

Biological control of the growth and development of winter crops.
Nauka i pered. op. v sel'khoz. 8 no.10:42-45 0 '58.

(MIRA 11:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Grain) (Growth (Plants))

KUPERMAN, F. M.

"Regularities in Organogenesis of Higher Angiosperms."

Paper submitted for the Int'l Botanical Congress, Montreal, Canada, 19-29 Aug 1959.

Moscow State University, U.S.S.R.

ANDREYENKO, Stepan Sidorovich; KUPERMAN, Fanni Mikhaylovna; RUBIN, B.A.,
prof., obshchiy red.; GOL'TSMAN, O.G., ed.; LAZAREVA, L.V.,
tekhn.red.

[Physiology of corn; studies on the physiology of development,
growth, photosynthesis, mineral nutrition, and water regimen]
Fiziologiya kukuruzy; ocherki po fiziologii razvitiya, rosta,
fotosinteza, mineral'nogo pitaniya i vodnogo rezhima. Pod
obshchey red. S.A.Rubina. Moskva, Izd-vo Mosk.univ., 1959.
288 p.

(Corn (Maize))

(MIRA 12:12)

KUPERMAN, F.M., prof.

Method of determining the condition of winter crop stands.
Zemledelie 7 no.8:48-57 Ag '59. (MIRA 12:10)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Grain)

KUPERMAN, F., doktor biolog. nauk; PISAREV, V., doktor sel'skokhoz. nauk

A good monograph ("Siberian millet" by E.T. Varenitsa. Reviewed
by F. Kuperman and V. Pisarev). Nauka i pered. op. v sel'khoz. 9
no.4:78-79 Ap '59. (MIRA 12:6)
(Millet) (Varenitsa, E.T.)

VERENITSA, Ye., doktor biolog. nauk; KUPPERMAN, F., doktor biolog. nauk;
PISAREV, V., doktor sel'skokhoz. nauk

Outstanding works of a Soviet scientist. Nauka i pered. op. v
sel'khoz 9 no.10:77-79 0 '59 (MIRA 13:3)
(Lysenko, Trofim Denisovich, 1898-)

KUPERMAN, Fanni Mikhaylovna, prof., doktor biolog. nauk; LEONOVA, T.S.,
red.; SAVCIENKO, Ye.V., tekhn. red.

[Biological control in the service of the harvest] Biologicheskii
kontrol' na sluzhbu urozhaiu. Moskva, Izd-vo "Znanie," 1961. 52 p.
(Vsesoiuznoe obshchestvo po rasprostraneniю politicheskikh i
nauchnykh znaniy. Ser.8, Biologiya i meditsina, no.22)

(MIRA 15:1)

1. Moskovskiy Gosudarstvennyy universitet (for Kuperman)
(Plant physiology)

KUPPERMAN, Faina Mikhaylovna; DANIL'CHENKO, O.P., red.; YERMAKOV, M.S.,
tekhn.red.

[Theory of individual development and ways of controlling the
nature of the organism; lecture from a course in the biology
of plant development] Teoriia individual'nogo razvitiia i puti
upravleniia prirodoi organizma; lektsiia iz kursa "Biologiia
razvitiia rastenii". Moskva, Izd-vo Mosk.univ. No.1. 1961.
55 p.

(Ontogeny (Botany))

(MIRA 14:4)

ALEKSANDROV, V.G., prof., red.; DVORYANKIN, F.A., prof., red.; KADEN, N.N.,
kand. biol. nauk, red.; KUPERMAN, F.M., prof., red.; L'VOVA, I.N.,
kand. biol.nauk, red.; PALAMARCHUK, I.A., kand.biol.nauk, red.;
PODDUBNAYA-ARNOL'DI, V.A., prof., red.; PRONIN, V.A., kand.biol.nauk,
red.; RZHANOVA, Ye.I., kand. biol.nauk, red.; ROSTOVTSEVA, Z.P., kand.
biol.nauk, red.; SEREBRYAKOV, I.G., prof., red.; USTINOVA, Ye.I., kand.
biol.nauk, red.; CHELYADINOVA, A.I., kand. biol.nauk, red.; YERMAKOV,
M.S., tekhn. red.

[Morphogenesis in plants; transactions dedicated to the 100th anniversary
of the publication of Darwin's "Origin of species."] Morfogenez
rastenii; trudy posveshchaiutsia 100-letiiu so dnia vykhoda v svet
truda Charlza Darvina "Proiskhozhdeniye vidov." Moskva, Izd-vo Mosk.
univ. Vol.1. 1961. 683 p. (MIRA 14:9)

1. Soveshchaniye po morfogenezu rasteniy, 1959.
(Botany—Morphology)

RUSTEMBEKOV, S.S.; KUPERMAN, F.M.

Development and growth of various morphophysiological types of corn in relation to light. Nauch. dokl. vys. shkoly; biol. nauki no.2:206-214 '61. (MIRA 14:5)

1. Rekomendovana kafedroy darvinizma Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.
(CORN (MAIZE)) (PLANTS, EFFECT OF LIGHT ON)

KUPERMAN, F.M.

Morphological and physiological effect of light of different spectral composition on plants as related to the length of the photoperiod.

Nauch. dokl. vys. shkoly; biol. nauki no.4:136-146 '61.

(MIRA 14:11)

1. Rekomendovana kafedroy darvinizma Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.

(PLANTS, EFFECT OF LIGHT ON)

SHUL'GIN, I.A.; KUPERMAN, F.M.; VYSLOUKH, V.A.; SHCHERBINA, I.P.

Chlorophyll content as a physiological index of heterosis in corn.
Fiziol. rast. 8 no.6:754-756 '61. (MIRA 16:7)

1. Laboratory of the Biology of Development of Moscow University
and K.A. Timiriazev Institute of Plant Physiology, U.S.S.R.
Academy of Sciences, Moscow.
(Heterosis) (Corn (Maize)) (Chlorophyll)

KUPERMAN, F.M., prof. dr. biolog. nauk; FODOL'NIY, V.Z.; SHUL'GIN, I.A.,
kand. biolog. nauk

Changes in the shape and size of sunflower leaves in connection
with the stages of its organogenesis. Uch. zap. Kab.-Balk. gos.
un. no. 10:31-40 '61. (MIRA 17:6)

RZHANOVA, Yevdokiya Ivanovna; KUPERMAN, F.M., prof., otv. red.;
DANIL'CHENKO, O.P., red.; YERMAKOV, M.S., tekhn. red.

[Subject, methods, and problems of the biology of the development of higher plants; lecture from a course in the biology of plant development] Predmet, metody i zadachi biologii razvitiia vysshikh rastenii; lektsiia iz kursa "Biologiya razvitiia rastenii." Moskva, Izd-vo Mosk. univ., 1962. 30 p. (MIRA 16:1)
(Plant physiology)

KUPERMAN, Faina Mikhaylovna; DANIL'CHENKO, O.P., red.; YE.SIAKOV, M.S.,
tekhn. red.

[Theory of individual development and ways of controlling the
nature of the organism; lecture from a course in the biology
of plant development] Teoriia individual'nogo razvitiia i pu-
ti upravleniia prirodoi organizma; lektsiia iz kursa "Biologiia
razvitiia rastenii." Izd.2., dop. i perer. Moskva, Izd-vo
Mosk. univ., 1962. 67 p. (MIRA15:9)

(Ontogeny (Botany))

KUPERMAN, F.M., prof., red.; NECHAYEVA, Ye.G., red.; YERMAKOV, M.S.,
tekh. red.

[Biological control in agriculture; methods for determination,
tables, and brief description of the phases of organogenesis in
50 plant species] Biologicheskii kontrol' v sel'skom khoziaistve;
metodika opredeleniia, tablitsy i kratkoe opisanie etapov orga-
nogeneza 50 vidov rastenii. Moskva, Izd-vo Mosk. univ., 1962.
273 p. (MIRA 15:12)

(Botany, Economic) (Growth (Plants))

KEREFOV, K.N., doktor sel'skokhoz.nauk, prof.; KUPERMAN, F.M., doktor
bidlg. nauk, prof.; SHAUTSUKOV, Z.Kh., kand.sel'skokhoz. nauk

Morphophysiological analysis of the single-ear and double-ear
forms of corn on collective farms of the Kabardino-Balkar
A.S.S.R in 1961. Uch. zap. Kab. - Balk. gos. un. no.14:14-22'62.

(MIRA 16:6)

1. Kabardino-Balkarskiy gosudarstvennyy universitet (for
Kerefov), 2. Moskovskiy gosudarstvennyy universitet (for
Kuperman).

(KABARDINO-BALKAR A.S.S.R.—CORN BREEDING)

SHUL'GIN, I.A.; KUPERMAN, F.M.; SHCHERBINA, I.P.

Relation between the chlorophyll content and stages of organogenesis in corn. Fiziol. rast. 9 no.3:347-352 '62. (MIRA 15:11)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva Akademii nauk SSSR, Moskva i Laboratoriya biologii razvitiya rasteniy Moskovskogo gosudarstvennogo universiteta.
(Corn (Maize)) (Chlorophyll)

L'VOVA, Irina Nikolayevna; KUPERMAN, F.M., prof., otv. red.;
DANIL'CHENKO, O.P., red.; GEORGIYEVA, G.I., tekhn. red.

[Sex in plants; a lecture from the course "Biology of plant development"] Pol u rastenii; lektsiia dlia studentov zaocnogo i vechernego otdelenii biologicheskikh fakul'tetov gosudarstvennykh universitetov. Lektsiia iz kursa "Biologiya razvitiia rastenii." Moskva, Izd-vo Mosk. univ., 1963. 54 p.

(MIRA 16:5)

(Plants, Sex in)

KUPERMAN, Faina Mikhaylovna; DANIL'CHENKO, O.P., red.; CHISTYAKOVA,
K.S., tekhn. red.

[Physiologicomorphologic variability of plants in onto-
genesis; a lecture from the course "Biology of plant
development"] Morfofiziologicheskaya izmenchivost' rastenii
v ontogeneze; leksiya iz kursa "Biologiya razvitiya rastenii."
Moskva, Izd-vo Mosk. univ., 1963. 63 p. (MIRA 16:10)
(Ontogeny (Botany)) (Botany--Morphology)

KUPERMAN, Faina Mikhaylovna; DANIL'CHENKO, O.P., red.; GEORGIYEVA, G.I., tekhn. red.

[Characteristics of the individual development of plants depending on the conditions of the environment; light and plant development] Zakonomernosti individual'nogo razvitiia rastenii v zavisimosti ot uslovii vneshnei sredy; svet i razvitie rastenii. Lektsiia iz kursa "Biologiya razvitiia rastenii." Moskva, Izd-vo Mosk. univ., 1963. 102 p.
(MIRA 17:2)

SHUL'GIN, Igor' Aleksandrovich; KUPERMAN, F.M., prof., otv. red.;
KLESHCHIN, A.F., prof., otv.red.; DANTIL'CHENKO, O.P.,
red.; GEORGIYEVA, G.I., tekhn. red.

[Morphological adaptations of plants to light; optical
properties of leaves. A lecture from the course "Biology
of plant development"] Morfofiziologicheskie prispособleniia
rastenii k svetu; opticheskie svoistva list'ev. Lektsiia iz
kursa "Biologiya razvitiia rastenii." Moskva, Izd-vo Mosk.
univ. 1963. 72 p. (MIRA 16:9)

(Leaves--Optical properties)

KUPCHENKO, Faina Mikhaylovna, prof.; RZHANOVA, Yevdokiya Ivanovna,
docs.; PARSHADANOVA, K.G., red.

[Biology of plant development] Biologiya razvitiia ra-
stenii. Moskva, Vysshiaia shkola, 1963. 423 p.
(MIRA 17:9)

KUPCHENKO, Faina Mikhaylovna

[Morphological variability of plants in ontogenetic
a lecture from a course in the "Biology of plant develop-
ment"] Morfologicheskaya izmenchivost' rastenii v ontoge-
neze; lektsiia iz kursa "Biologiya razvitiia rastenii."
Moskva, Izd-vo Mosk. univ., 1962. 63 p.

(Pik' 10-15)

SHILYEV, S.V.; KLEMAN, P.M.

Effect of spectral light composition on the development of millet as related to the duration of photoperiods and the alternation of strong and weak light intensities. Vest. Mosk. un. Ser. 6: Biol., pochv. 20:10,6: 3-4/2 H-D '65.

(LEN 19:1)

1. Effect of the administration of Vitamin A

particular on the development and growth of the eye.
dekl. eye. rasko; biol. mekhan. 1970-1971, 10.

2. Effect of the administration of Vitamin A
to the developing embryo. M.V. 1970-1971, 10.

AUTHORS: Kuperman, F. Ye. and Landa, Ye. F. SOV/138-58-9-9/11

TITLE: The Bonding of Rubber to Plastics (Krepleniye reziny k plastmassam)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 9, pp 32 - 34 (USSR)

ABSTRACT: Investigations of a method of fixing rubbers to plastics are of great interest in mechanical engineering and other branches as construction material. Various British, Australian, U.S.A. and Japanese adhesives are quoted and tabulated (Refs. 1 - 8 and Table 1). A 20% solution of n,n',n"-triphenylmethane-triisocyanate in dichloroethane (the adhesive "Leykonat") was used. A thin layer of the adhesive was applied on the clean surface of Textolite, a laminated plastic. The latter was dried and then vulcanised at 135 - 140°C and 25 kg/cm² pressure. Good results were obtained with adhesives based on butadiene acrylonitrile and sodium-butadiene rubbers and also "Nairit", but the results were not favourable for NK rubbers. The strength of bonding was tested on a dynamometer and found to reach 20 kg/cm² (Table 2) for polar rubbers such as SKN-40 and "Nairil". For butadiene-acrylonitrile rubber (SKN-40) the strength of bonding

Card 1/2

The Bonding of Rubber to Plastics

SOV/138-58-9-9/11

was, in first approximation, inversely proportional to the hardness of the rubber (Fig.2). This method is used mainly in the car industry. The adhesive "Leykonat" can also be used for the bonding of polar and sodium-butadiene rubbers to aldehyde (phenol-formaldehyde) plastics. There are 2 Tables, 1 Figure and 8 References: 1 French and 7 English.

ASSOCIATION: Zavod "Kauchuk"
(Factory "Kauchuk")

Card 2/2

TSUKERBERG, S.M.; ZAKHAROV, S.P.; NENAKHOV, B.V.; ABRAMOVA, E.Ye.;
ZUYEV, Yu.S., red.; KUPZUMAN, F.Ye., red.; LPERANSKAYA, A.A.,
tekhn.red.

[High-roadability tires for motor vehicles] Shiny dlia avtomo-
bilei povyshennoi prokhodimosti. Moskva, Gos.nauchno-tekhn.izd-vo
khim.lit-ry, 1960, 71 p. (MIRA 14:4)
(Motor vehicles--Tires)

PRIKLONSKAYA, Natal'ya Vladimirovna; SKACHKOV, Aleksey Sergeyevich;
KUPERMAN, F.Ye., red.; ZAZUL'SKAYA, V.F., tekhn. red.;
PANTELEYEVA, L.A., tekhn. red.

[Rapid methods of rubber compounding] Skorostnye metody
prigotovleniia rezinovykh smesei. Moskva, Goskhimizdat,
1963. 419 p. (MIRA 16:11)

(Rubber machinery)

ACCESSION NR: AP4015074

S/0138/64/000/001/0010/0014

AUTHORS: Kuperman, F. Ye.; Karmin, B. K.

TITLE: Peculiarities in fatigue properties of vulcanized rubbers on the base of carboxyl containing rubbers (Presented at the third conference on chemistry and technology of rubber and its vulcanizates. Yaroslavl', December 17, 1960)

SOURCE: Kauchuk i rezina,²³ no. 1, 1964, 10-14

TOPIC TAGS: rubber, vulcanized rubber, methacrylic acid, magnesium oxide, zinc oxide, thiuram, sulfur, butadiene, styrene, static deformation, dynamic deformation, fatigue, creep, orientation, scorching

ABSTRACT: Filled vulcanizates of the protector type were investigated. These consisted mainly of a butadiene (70%) - styrene (30%) copolymer, containing in most instances 0.5, 0.8, and 1.25% methacrylic acid, 2.5% MgO, 1% ZnO, 2.5% thiuram, and 1% sulfur. The filler consisted of 20% (by weight) channel carbon black and 20% gas chimney carbon black. It was found that the creep (at 140C under constant load) of the test samples decreased with an increase in methacrylic acid content, while the durability and resistance to stretch fatigue went up

Card 1/2

ACCESSION NR: AP4015074

sharply. On the other hand, under the effect of a reversed bending test with a twist, the durability of the vulcanizates decreased with higher methacrylic acid content. The authors attribute this to a higher modulus of internal friction. Since it is also known that substantial scorching takes place in the process of vulcanization of rubbers containing carboxyl groups, the authors recommend limiting the methacrylic acid content in butadiene-styrene rubbers to 0.5-0.8%. Orig. art. has: 8 charts and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry)

SUBMITTED: 00

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: CH

NO REF SOV: 008

OTHER: 005

Card 2/2

ACCESSION NR: AT5004100

S/000 1/64/000/000/0101/0123

21

1. P. Kopechman, F. Ye. Karmin, B. K.

Card 1/3

channel black per 100% rubber. Viscosity was determined at 70-140C on a rotary

140C elastic recovery on a compression plate and deformation

and 140C modulus on a compression plate

and 140C modulus on a compression plate

and 140C modulus on a compression plate

Card 2/3

1. A. I. 004100

1. In the knowledge the assistance of Yu. A. Shesterkina and E. A. Anifimova in the

AUTHOR: Kuperman, G.B. (Moscow)

SOV-47-58-5-7/28

TITLE: The Study of the Properties of Solids in Connection with Their Structure (Izucheniye svoystv tverdykh tel v svyazi s ikh stroeniyem)

PERIODICAL: Fizika v shkole, 1958, Nr 5, pp 29-40 (USSR)

ABSTRACT: In instructing on "Properties of Solids", principal attention is given to the exposition of questions of applied and not of physical characteristics. The properties of solids, however, are being taught in the section "Molecular Physics and Heat". Therefore, this theme should consist mainly of information on such phenomena in solids which are caused by the motion of molecules and their mutual interaction. In polytechnical schools, physical phenomena must be studied in close touch with practical problems. Therefore, the students must become familiar with the physical fundamentals of the most widely-distributed methods of changes in the properties of solids. This can be done by a systematic study of the structure of solids and of the connection between the solid and its structure. The article describes how this can be achieved. The method proposed has been tested by the author and the teachers T.P. Zelenova of the 151st and A.I. Gervash of the 706th

Card 1/2

SOV-47-59-5-7/28

The Study of the Properties of Solids in Connection with Their Structure

Moscow Schools.

There are 5 drawings, 1 graph, 16 figures, 1 table and
20 Soviet references.

1. Solids--Properties

Card 2/2

KUPERMAN, G.B. (Moscow)

Qualitative problems in the physics of solids. Fiz. v shkole 18
no.4:76-77 JI-Ag '58. (MIRA 11:7)
(Physics--Problems, exercises, etc.)

17 AND 2ND GATES

PRECEDENCE AND PROPERTIES INDEX

Electrolysis for Chromium Plating. G. M. Kuyerman and L. D. Melikadze. *Trudy Tbilis. Khim. Inst.*, 1940, 2, 207-216; *Khim. Referat. Zhur.*, 1941, 4, (2), 78; *C. Aba.*, 1943, 37, 3351. (In Russian.) The object of the experiments was to devise a method for obtaining chromium electrolyte from available raw materials. The following technical scheme was used: production of CaCrO_4 from fused $\text{Na}_2\text{Cr}_2\text{O}_7$ and the separation of CrO_3 from it by decomposition with H_2SO_4 . The optimum concentration of the initial $\text{Na}_2\text{Cr}_2\text{O}_7$ is 10%. Increasing the concentration of $\text{Na}_2\text{Cr}_2\text{O}_7$ increases the amount of NaOH formed from the reaction: $\text{Na}_2\text{Cr}_2\text{O}_7 + 2\text{Ca(OH)}_2 \rightarrow 2\text{CaCrO}_4 + 2\text{NaOH} + \text{H}_2\text{O}$; this increases the solubility of CaCrO_4 in H_2SO_4 . The process must be carried out at 90° C., at which temperature a higher yield of the fine-grained CaCrO_4 precipitate is obtained, and the CaCrO_4 is less soluble than at lower temperatures. The excess CaO required for a complete precipitation is 15-20%. The precipitate formed contains CaCrO_4 , $2\text{H}_2\text{O}$, 80%, and CaO 10%. The CaCrO_4 is filtered, washed, dried, and transformed into CrO_3 with H_2SO_4 (400 gm./litre) by mixing and heating. The gypsum is separated by settling or filtering, the solution containing 60-70 gm. of CrO_3 /litre is evaporated, the excess H_2SO_4 neutralized with CaCrO_4 , and the gypsum formed is separated, to leave a solution containing CrO_3 300, H_2SO_4 up to 25, and CaO up to 5 gm./litre. The solution is suitable for chromium plating. The relative amounts of the substances used per unit of CrO_3 are: $\text{Na}_2\text{Cr}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$ 2.127, H_2SO_4 (monohydrate) 1.854, and CaO 1.270. The adaptation of the method to plant conditions is described in detail.

ASM-A.A. METALLURGICAL LITERATURE CLASSIFICATION

63000 630000

63000 630000

100 AND 074 (025)

1ST AND 2ND DEGREE

PROCESSES AND PROPERTIES INDEX

BC

B-1-3

Recovery of substance, gold from gold ion, a by-product of previous reaction. O. R. Kuznetsov (J. Appl. Chem. Russ., 1942, 15, 120-121). "Brine acid" (30-40% H_2SO_4 containing arg. substance as 1-5% of G) is passed continuously from the cathode to the anode chamber of an electrolyzer (Pt electrodes, porcelain diaphragm). Under these conditions practically complete alimination of arg. substance takes place (as gaseous hydrocarbons from the catholyte, and as hydrocarbons and CO_2 from the anolyte). The colorless acid is obtained in tone by evaporation. R. T.

COMMON ELEMENTS

OPEN

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

10000 110000 200000 300000 400000 500000 600000 700000 800000 900000 1000000 1100000 1200000 1300000 1400000 1500000 1600000 1700000 1800000 1900000 2000000 2100000 2200000 2300000 2400000 2500000 2600000 2700000 2800000 2900000 3000000 3100000 3200000 3300000 3400000 3500000 3600000 3700000 3800000 3900000 4000000 4100000 4200000 4300000 4400000 4500000 4600000 4700000 4800000 4900000 5000000 5100000 5200000 5300000 5400000 5500000 5600000 5700000 5800000 5900000 6000000 6100000 6200000 6300000 6400000 6500000 6600000 6700000 6800000 6900000 7000000 7100000 7200000 7300000 7400000 7500000 7600000 7700000 7800000 7900000 8000000 8100000 8200000 8300000 8400000 8500000 8600000 8700000 8800000 8900000 9000000 9100000 9200000 9300000 9400000 9500000 9600000 9700000 9800000 9900000 10000000 10100000 10200000 10300000 10400000 10500000 10600000 10700000 10800000 10900000 11000000 11100000 11200000 11300000 11400000 11500000 11600000 11700000 11800000 11900000 12000000 12100000 12200000 12300000 12400000 12500000 12600000 12700000 12800000 12900000 13000000 13100000 13200000 13300000 13400000 13500000 13600000 13700000 13800000 13900000 14000000 14100000 14200000 14300000 14400000 14500000 14600000 14700000 14800000 14900000 15000000 15100000 15200000 15300000 15400000 15500000 15600000 15700000 15800000 15900000 16000000 16100000 16200000 16300000 16400000 16500000 16600000 16700000 16800000 16900000 17000000 17100000 17200000 17300000 17400000 17500000 17600000 17700000 17800000 17900000 18000000 18100000 18200000 18300000 18400000 18500000 18600000 18700000 18800000 18900000 19000000 19100000 19200000 19300000 19400000 19500000 19600000 19700000 19800000 19900000 20000000 20100000 20200000 20300000 20400000 20500000 20600000 20700000 20800000 20900000 21000000 21100000 21200000 21300000 21400000 21500000 21600000 21700000 21800000 21900000 22000000 22100000 22200000 22300000 22400000 22500000 22600000 22700000 22800000 22900000 23000000 23100000 23200000 23300000 23400000 23500000 23600000 23700000 23800000 23900000 24000000 24100000 24200000 24300000 24400000 24500000 24600000 24700000 24800000 24900000 25000000 25100000 25200000 25300000 25400000 25500000 25600000 25700000 25800000 25900000 26000000 26100000 26200000 26300000 26400000 26500000 26600000 26700000 26800000 26900000 27000000 27100000 27200000 27300000 27400000 27500000 27600000 27700000 27800000 27900000 28000000 28100000 28200000 28300000 28400000 28500000 28600000 28700000 28800000 28900000 29000000 29100000 29200000 29300000 29400000 29500000 29600000 29700000 29800000 29900000 30000000 30100000 30200000 30300000 30400000 30500000 30600000 30700000 30800000 30900000 31000000 31100000 31200000 31300000 31400000 31500000 31600000 31700000 31800000 31900000 32000000 32100000 32200000 32300000 32400000 32500000 32600000 32700000 32800000 32900000 33000000 33100000 33200000 33300000 33400000 33500000 33600000 33700000 33800000 33900000 34000000 34100000 34200000 34300000 34400000 34500000 34600000 34700000 34800000 34900000 35000000 35100000 35200000 35300000 35400000 35500000 35600000 35700000 35800000 35900000 36000000 36100000 36200000 36300000 36400000 36500000 36600000 36700000 36800000 36900000 37000000 37100000 37200000 37300000 37400000 37500000 37600000 37700000 37800000 37900000 38000000 38100000 38200000 38300000 38400000 38500000 38600000 38700000 38800000 38900000 39000000 39100000 39200000 39300000 39400000 39500000 39600000 39700000 39800000 39900000 40000000 40100000 40200000 40300000 40400000 40500000 40600000 40700000 40800000 40900000 41000000 41100000 41200000 41300000 41400000 41500000 41600000 41700000 41800000 41900000 42000000 42100000 42200000 42300000 42400000 42500000 42600000 42700000 42800000 42900000 43000000 43100000 43200000 43300000 43400000 43500000 43

Electrolyzer. G. M. Kuperman. U.S.S.R. 67,910,
Feb. 28, 1947. M. 11. 7

GTRSP L No. 45

Kuperman, F.M. (M.V. Lomonosov Moscow State University). Regularities in the change of
a variety of barley in connection with the conditions of stage development. 681.4

Akademiya Nauk, S.S.S.R. Doklady Vol. 79 No. 4

KUPERMAN, G.H.; GVARAMADZE, D.Kh.; DZHIKIYA, S.I.; ZARKUA, N.P.

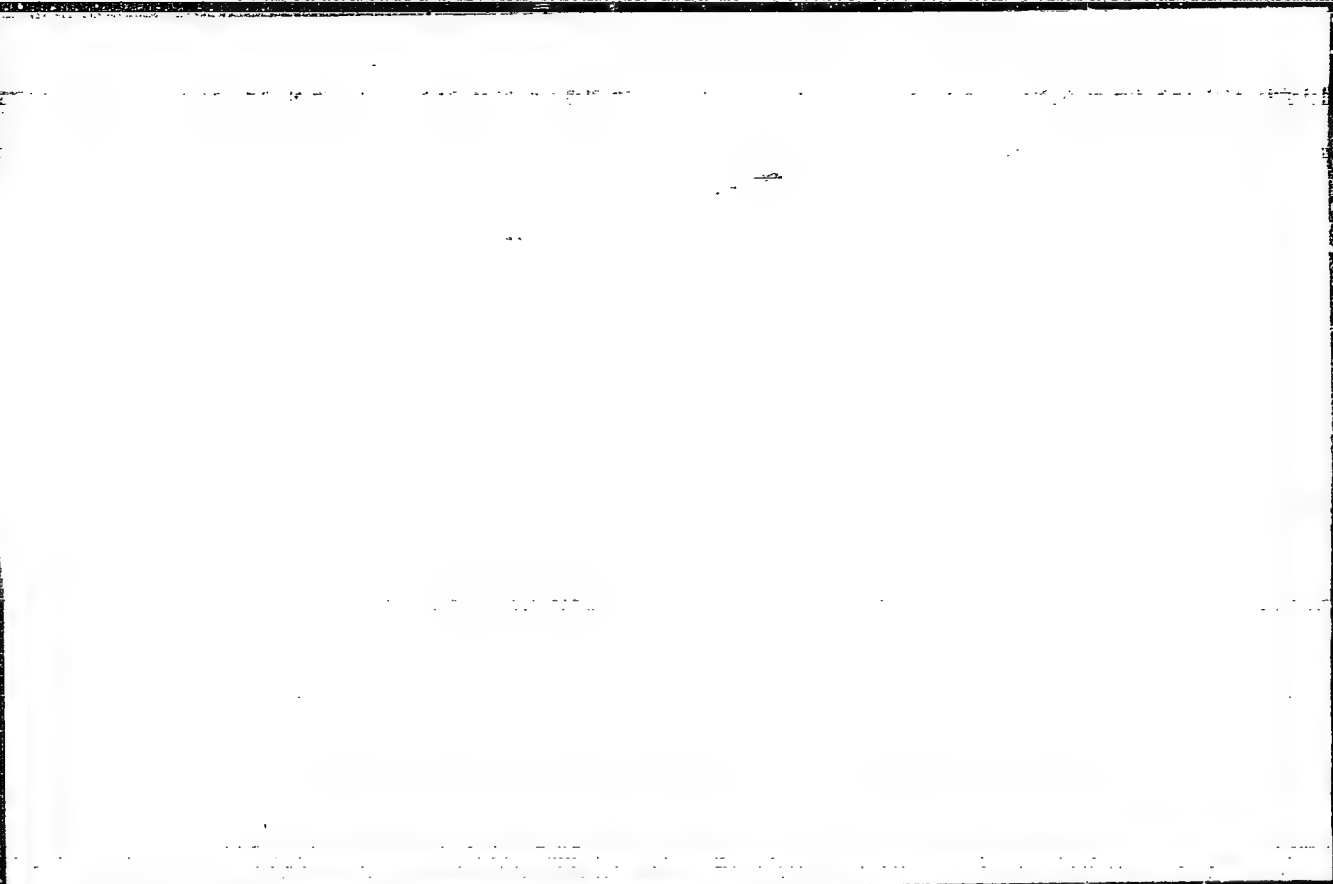
Obtaining soda from mirabilite and barite of Georgian
deposits. Trudy Inst. khim. AN Gruz.SSR 11:117-125
'63.

(MLRA 10:2)

(Sodium sulfate) (Mirabilite) (Barite)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000927610002-4



APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000927610002-4"

KUPERMAN, G.M.

Preparation of alums and aluminum sulfate, based on Zaglik alunites and the sulfuric acid waste from the acid tars of the petroleum refining industry. Part 1. Trudy Inst.khim. AN Gruz. SSR 14:203-230 '58. (MIRA 13:4)
(Alum) (Aluminum sulfate) (Zaglik (Azerbaijan)--Alunite)

KUPERMAN, G.M.

Preparation of alums and aluminum sulfate, based on Zaglik
alunites and the sulfuric acid waste from the acid tars of the
petroleum refining industry. Part 2. Trudy Inst.khim. AN Gruz.
SSR 14:231-252 '58. (MIRA 13:4)

(Alum) (Aluminum sulfate)
(Zaglik(Azerbaijan)--Alunite)

KUPERMAN, G.M.; GOGORISHVILI, P.V.; ZARKUA, N.P.; GONGLIASHVILI, A.N.

Extraction of copper from sulfide ores by the autoclave method.
Soob.AN Gruz.SSR 25 no.5:533-538 N '60. (MIRA 14:1)

1. Akademiya nauk GruzSSR, Institut khimii imeni P.G.Melikishvili,
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3627. RATES OF CONSUMPTION OF ELECTRICITY IN PULVERISATION OF CENTRAL ASIAN COALS IN SHAFT PULVERISER PLANTS. Kuperman, L. I. (Za Ekonomiyu Toplivo (Fuel Econ.), 1949, (8), 17-20). Rates vary between 5.6 and 23.4 k.W.h. per ton according to type of coal, size before and after pulverisation and wear in pulveriser. (L).

430.924 METALLURGICAL LITERATURE CLASSIFICATION

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PHASE I BOOK EXPLOITATION

SOV/2068

Kuperman, L.I.

Leninskiye idei elektrifikatsii v deystvii (Lenin's Ideas on Electrification Are Carried Out) Odessa, 1957. 113 p. No. of copies printed not given.

Sponsoring Agency: Odesskiy politekhnicheskiy institut. Kafedra promyshlennoy teplotekhniki.

No contributors mentioned.

PURPOSE: This booklet is intended for the general reader interested in the history of electrification in the USSR.

COVERAGE: This booklet describes the progress made in the electrification of the USSR. Early work by GOELRO (State Commission for the Electrification of Russia) is discussed as are the effects of the dislocations and interruptions caused by the Civil War and

Card 1/3

Lenin's Ideas on Electrification (Cont.)

SOV/2068

World War II. The author defines the importance of both mineral fuels and water power to the overall electrification picture. He provides statistical data showing annual increases in electric power production, appropriations allocated to electric power plants, personnel employed by power stations, capacity of power stations, electric power generation by republics, etc. There are 8 references, all Soviet.

TABLE OF CONTENTS:

Importance of Electrification as Foreseen by the Founders of Marxism-Leninism	3
Plan of the GOELRO (State Commission for the Electrification of Russia) and Its Historical Significance	9
Development of the Electric-power Plant Network in the USSR	13
a) Principal goals of the GOELRO plan	13
b) Implementation of the GOELRO plan	17
c) Electric-power plant construction during the period of the socialist Five Year Plans	22

Card 2/3